

# Migrating de Government to FS

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## • Summary



1.The Government, a special scenario

2.Why to migrate the Gov'nt to FS

STRATEGY

3.Previous experiences

4.Methodology

5.Migration types, paths and phases

METHODOLOGICAL

6.Critical points

7.The distro: Why Fedora?

8.Some technical solutions

TECHNICAL

9.Some migration recommendations

## 1.The Government, a special scenario



### **Private company**

CEO & Financial Man.

IT Manager

Employee

Private resource

Economic reasons

### **Government**

Politician

IT Manager

Government employee

Public resources

Economic+Other reasons

## 2.Why to migrate the Gov'nt to FS (1/3)

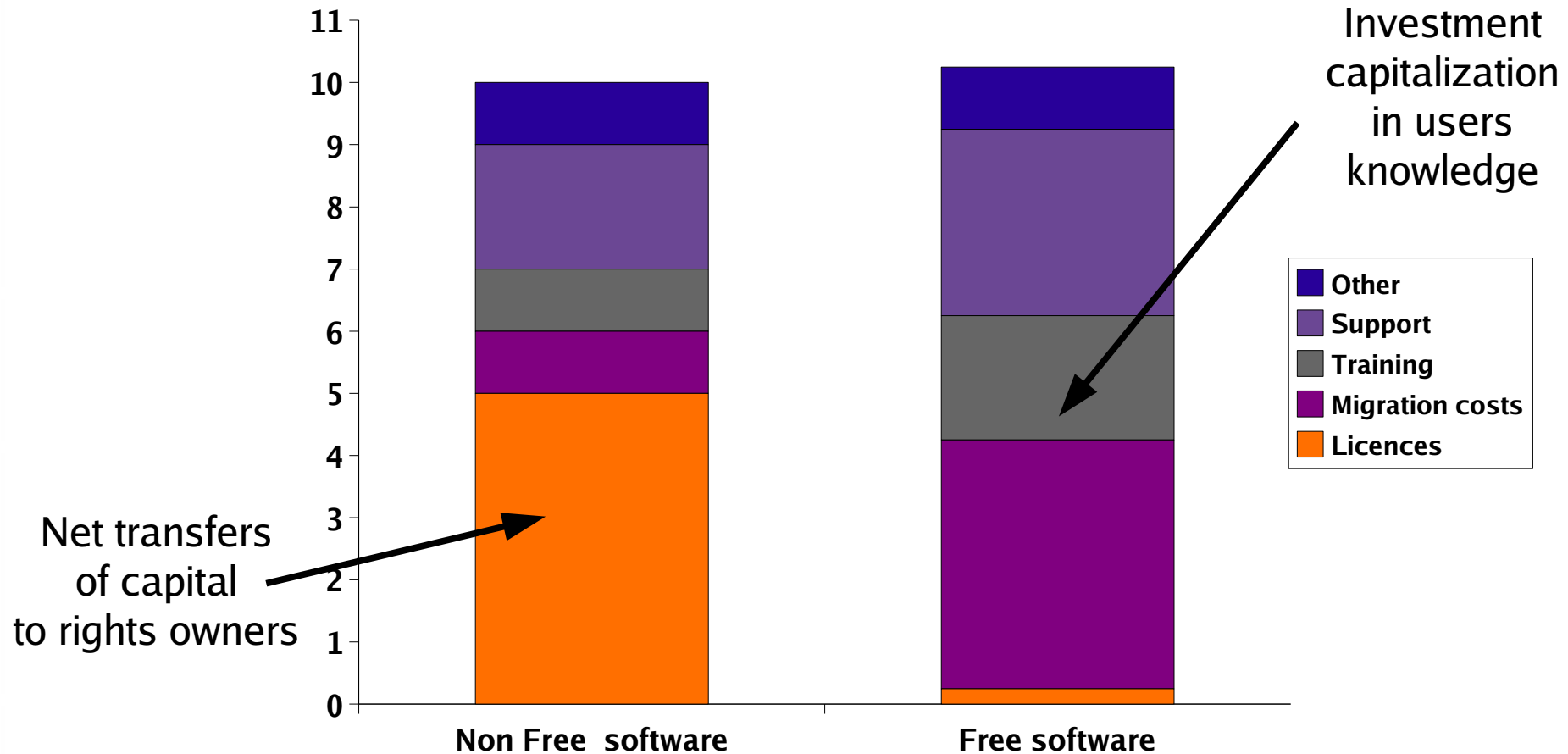


- The 4 freedoms (Do you need more?)
- Economic efficiency
- Local industry and innovation
- Supplier independence
- Localized software (paying > ½ M € for catalan windows)
- Grant data persistence and access
- Data interchange between Administrations

## 2.Why to migrate the Gov'nt to FS (2/3)



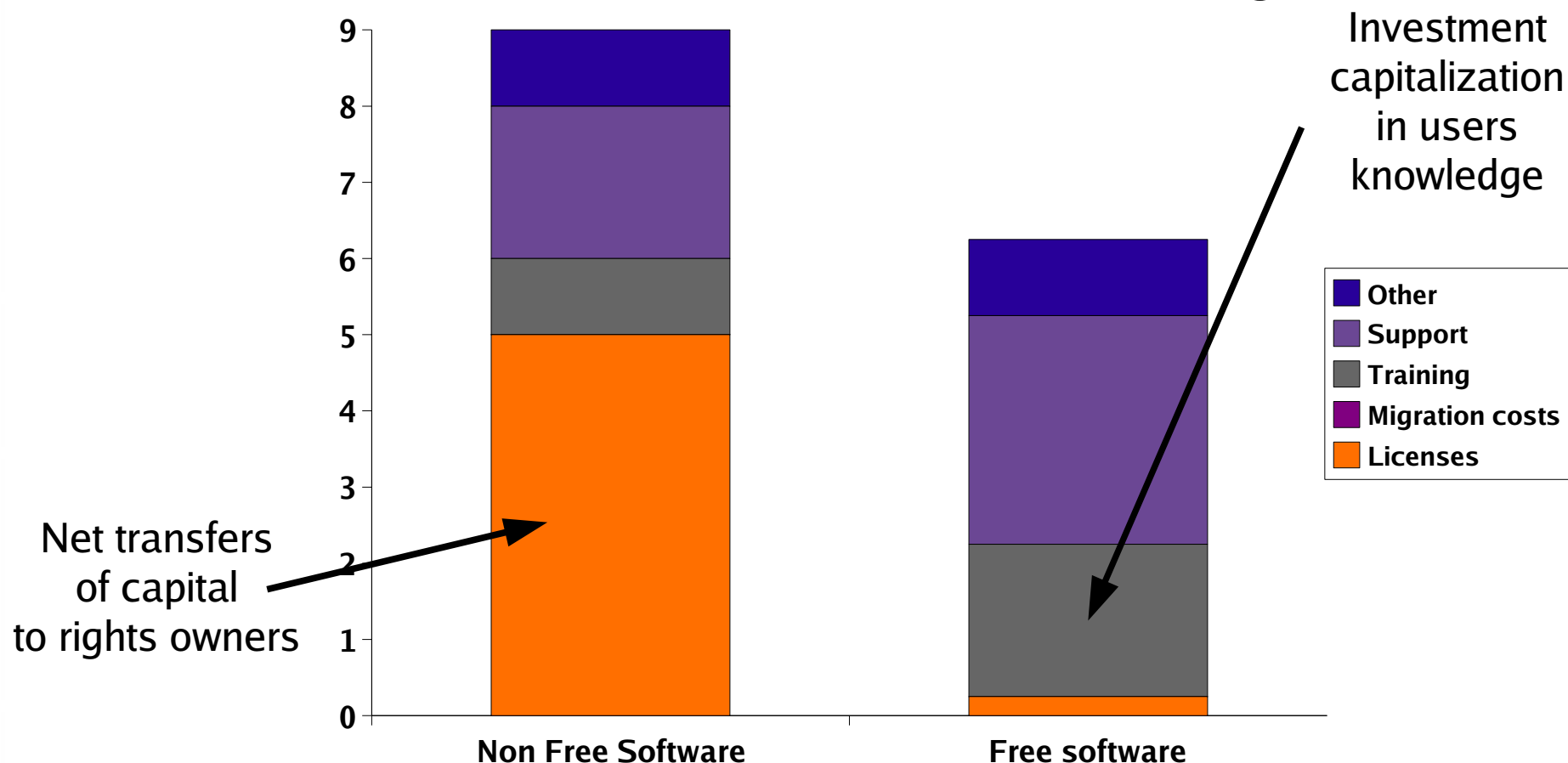
### Costs structure - 1st stage



## 2.Why to migrate the Gov'nt to FS (3/3)



### Costs structure - 2nd stage





## 3.Previous experiences (1/2)

- Linex – Extremadura (Autonomous Community)
  - In 2002, 1<sup>st</sup> European Public School System that moves to GNU/Linux (>60.000 pc's)
  - 60 M € saved in licences (in 2 years)
  - With some of these savings:
    - Trained 17.000 teachers
    - Bought hardware, 1 pc each 2 students
  - They moved all the Public system to FS: education, health, administration, ...

## 3.Previous experiences (2/2)



- Guadalinux – Andalucía
  - Agreement with Linex
  - Reusing all the knowledge, experience, developed software, ...
  - Enormous savings, not only in licences, due the Linex previous experience.

**This is how Free Software Community Works!**



## 4.Methodology (1/2)



(from IDA (EUC): Interchange of Data between Administrations)

- Any migration should consist in general of :

- 1.Data gathering and project definition phase

- 2.Justification for the migration including the cost

- 3.Pilot phase(s) to test the plan. Data from pilot(s) feed back into the plan.

- 4.Carry out the plan.

- 5.Monitoring of the actual experience against the plan.

## 4.Methodology (2/2)



- 1. Data gathering and project definition phase
  - A. A description of the set of relevant initial conditions consisting of, for instance:
    - systems architecture(s), applications and their associated data, protocols and standards used, hardware, the physical environment (such as network bandwidth, location), the social requirements (such as language(s) and staff skill sets)
  - B. A set of target conditions in the same detail
  - C. A description of how to get from the existing to the planned conditions

## 5. Migration types, paths and phases (1/3)



- Types:
  - “Replacing migration” vs “Continuing migration”
    - One migration has to be done: at least for staying on MS Windows (from NT server to Server 2003; from w98, NT to 2000 or XP; from Office '97/2000 to 2003; from exchange 5.5...)
  - “Complete migration” vs “Partial migration”
    - Not everything should / could be migrated

## 5. Migration types, paths and phases (2/3)

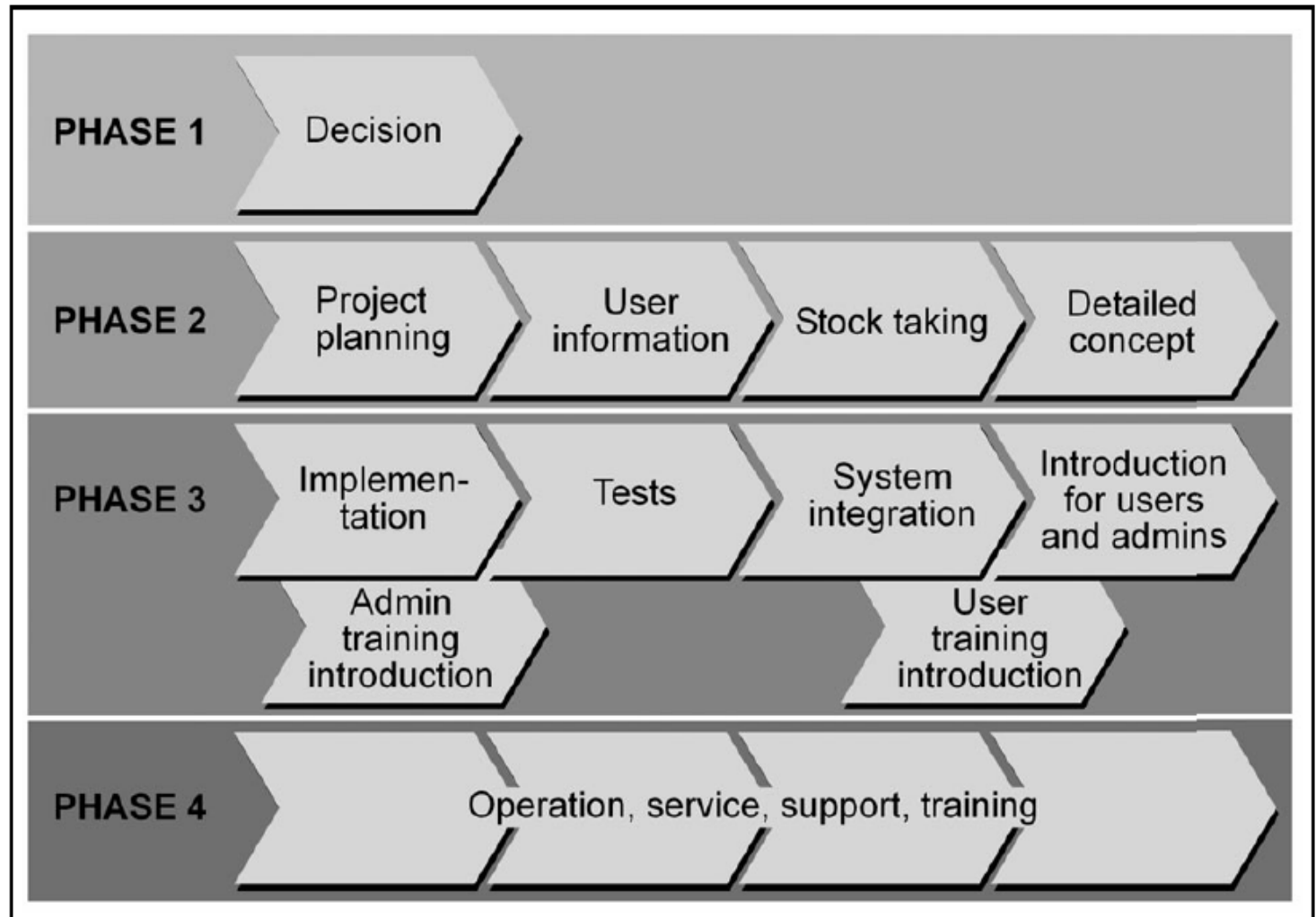


- Paths:
  - “One step migration” vs “Gentle migration”
    - One step: Shorter, more intensive, but just one time
    - Gentle: Longer, more relaxed... many times
  - Servers / Apps / OS
    - From server to desktop
      - When easy to migrate server services (small and standard)
      - Local apps difficult or impossible to migrate
    - From desktop to server
      - When complex, large and difficult to migrate server services exist

## 5. Migration types, paths and phases (3/3)



- Phases:



Graphic from the German Government: Bundesministerium des Innern FS guide



## 6.Critical points

- Human topics: Information, Training, Care/Sup.
- Legacy apps and doc formats
- Privative server services (own and suppliers)
- Privative corporative services and systems
- Privative non migrable apps
- Local and customized support
- Supplier MUST know the “sitz in leven”



## 7.The distro (1/4)

- Why to do a distro if marvellous ones exist?
- Migrating to free software it isn't about the distro, it's about the software.
- Focus the efforts on the Migration
- Choose the one best fits your needs, and best covers the technical challenges to do your migration. Then... develop software and contribute to the whole community.

## 7.The distro (2/4)



The distro should be, at least:

- 100% free (“as in freedom”) and Community maintained
- 100% free (“as in 'free beer'”)
- Multi-purpose (server / desktop / workstation ...)
- Easy to do massive deploys
- Easy to maintain in large environments
- Mature
- “Cutting-edge”
- Exist an”enterprise” release “just in case ...”
- Translated (and maintained) to the local language



## 7.The distro: Why Fedora? (3/4)



- 100% free (“as in freedom”) -> Are you joking?
- 100% free (“as in beer”) -> We are talking about Linux!
- Multi-purpose: server / desktop / workstation -> And much more!
- Easy to do massive deploys -> And God created “Kickstart”!

## 7.The distro: Why Fedora? (4/4)



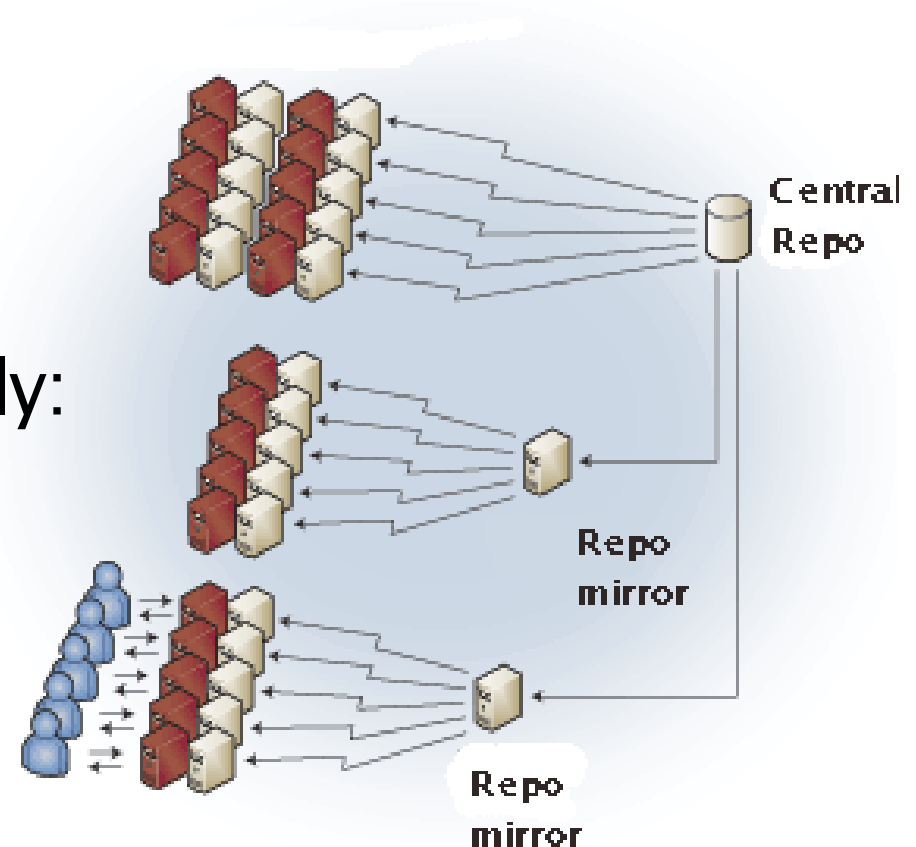
- Easy to maintain in large environments -> Easy to create local / customized repos / packages
- Mature -> We are building RedHat 15, isn't it?
- “Cutting-edge”: Still mounting & unmounting?
- Exist an “enterprise” release “just in case ...” -> RHEL If needed (certified release for 3<sup>rd</sup> part products...)
- Translated (and maintained) to the local language

## 8. Some technical solutions (1/3)

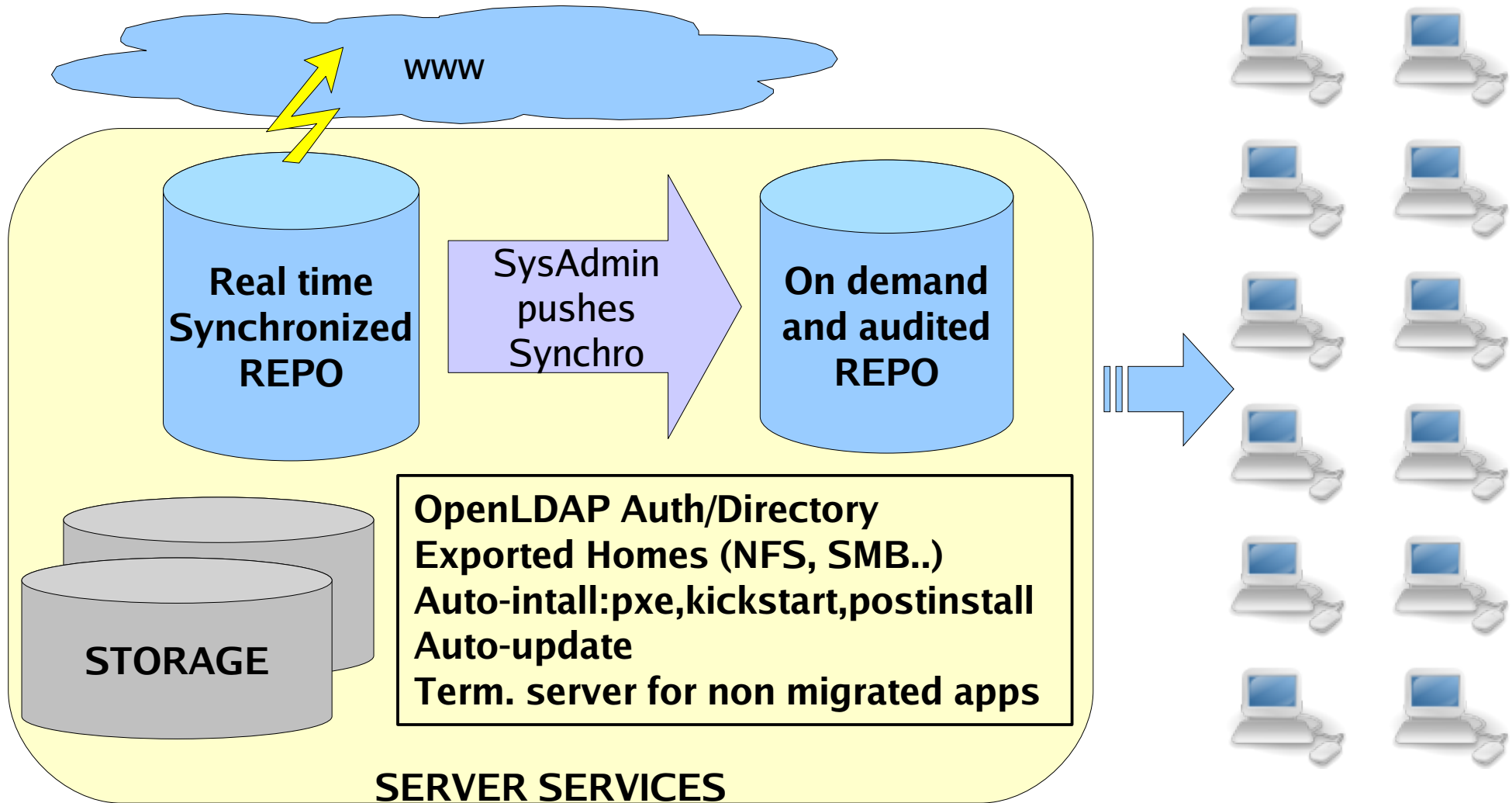


- Large/medium agencies

- Server side is a long term migration.
- Desktop OS running locally:
  - OpenLDAP Auth/Directory
  - Exported Homes
  - Auto-intall (pxe+kickstart+postinstall)
  - Auto-update
  - Terminal server for non migrated apps



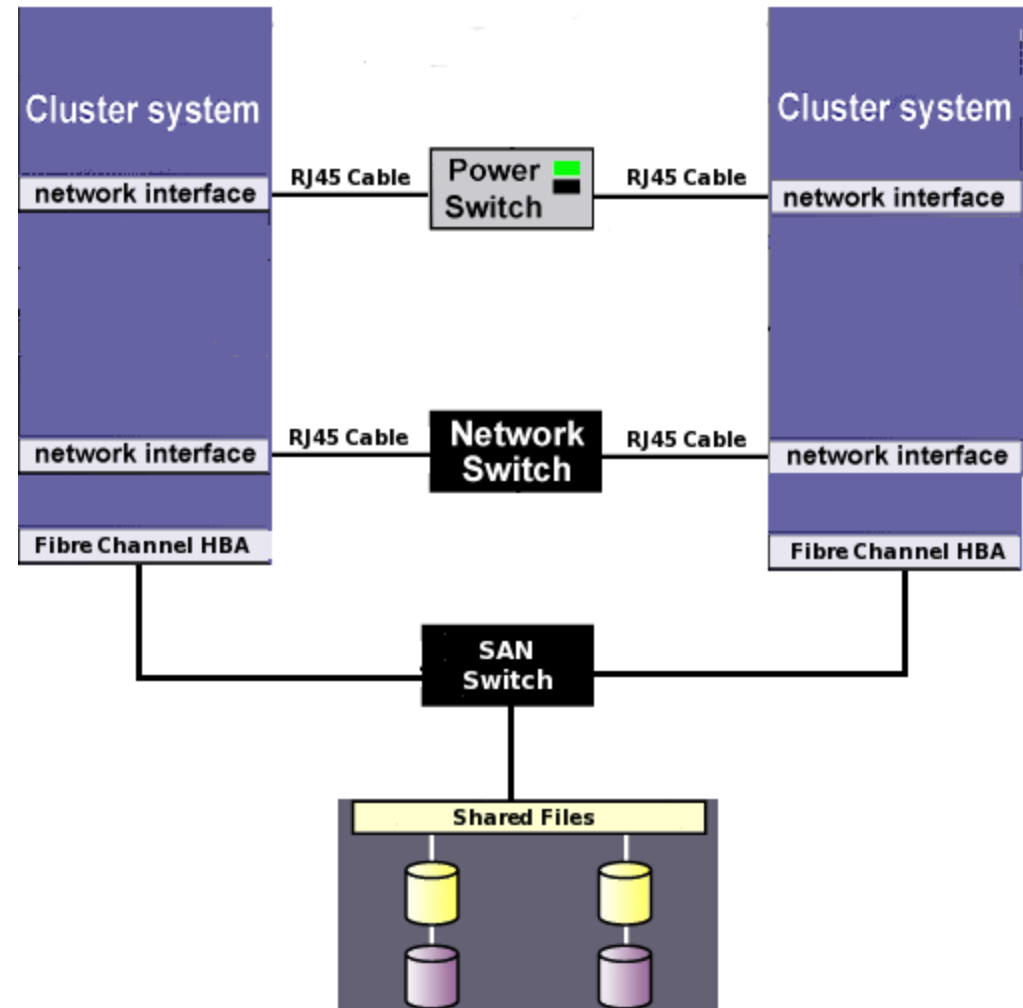
## 8. Some technical solutions (1/3)



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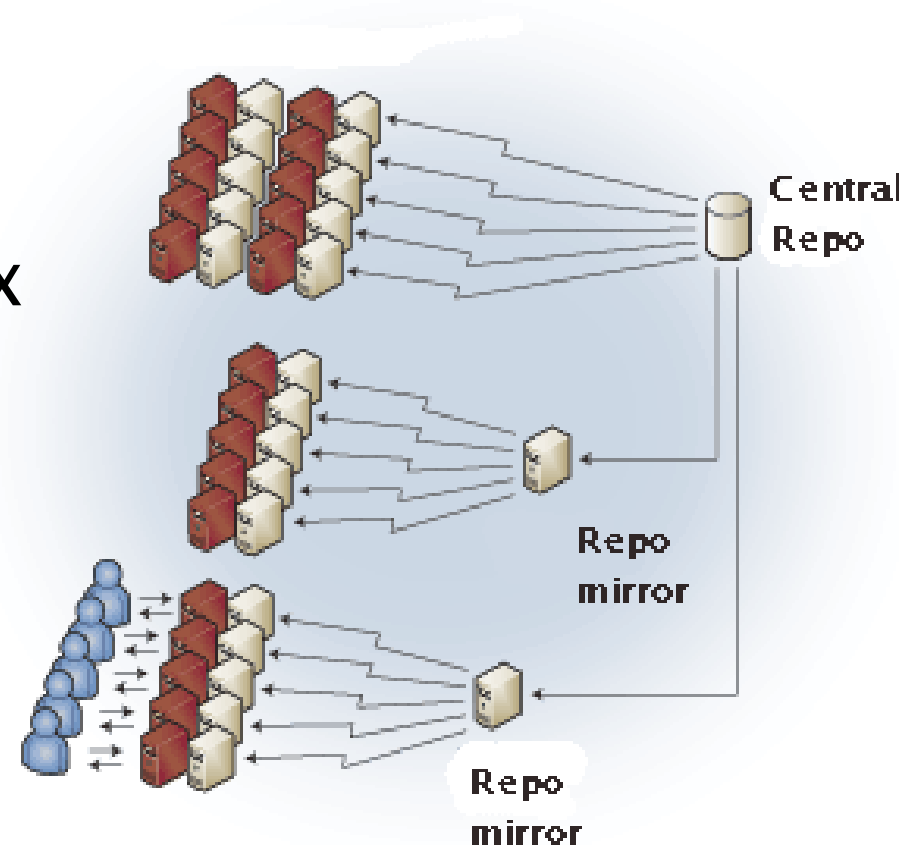
- Server(s) must be:
  - Clustered
  - Redundant
  - Fault tolerant



## 8. Some technical solutions (2/3)



- Small agencies
  - Server side is not complex
  - Standard server services
  - In really small centres with old hardware: LTSP solutions



## 8. Some technical solutions (3/3)



### Small and "office" agencies

	FUNCTIONALITY	SOLUTION	Notes
<b>Server services</b>	Auth	Standard Server Services in FS: OpenLDAP, sendmail / postfix, Samba, rsync, ...	
	Mail		
	Files		
	Print		
	Backups		
	Security		
<b>PIM</b>	Calendar	Evolution + Servers / Groupware	Corporate Exchange + Apl. groupware
	Contacts		
	Tasks		
	Mail		
<b>Office</b>	Office suite	OpenOffice	Legacy templates, macros, access apps
<b>Internet</b>	Browser	Firefox	Test all intranets and web apps
	Mail	Evolution	
<b>OS</b>	Operative System	Client + Terminal + Stateless ... / Fedora	Laptops!

## 9. Some migration recommendations (1/2)



- Focus on the migration
- End users, key on success
- Human issues are capital: in time, money and success
- Information, Training, Care & Support
- Don't forget legal aspects: copyright, patent, liability...



## 9. Some migration recommendations (2/2)



- Use “One step migration” if you can (for instance, if you are a small agency)
- Large an Medium Agencies usually got complex server services and apps; start with de desktop (replacing apps and, if you can, OS).  
Meanwhile start migrating the server side.

## 9.Q&A



# Thank you!

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